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REMARKS

Claim Objections

Claim 8 is objected to for a duplicate word and a misspelled word. Applicants have responded to this objection by amending claim 8 as described above, thereby placing claim 8 in condition for allowance.

Claim Rejections – 35 U.S.C. §102

Claims 1-60 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Tamayo *et al.* (U.S. Patent Application No. 2002/0083067). As will be shown below, Tamayo does not teach:

- identifying a business problem to be solved;

- selecting a data mining algorithm appropriate for solving the business problem;

- defining data schema for use as inputs and outputs to and from the mining algorithm, the data schema including input data schema and output data schema; or

- defining a data mining model dependent upon the data schema, defining a data mining model resulting in the creation of a predefined data mining model, whereby a domain-specific analytic application is developed, the analytic application having at least one predefined data mining model.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros.*

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v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The description and enabling disclosure requirements of the first paragraph of 35 USC 112 have developed definition through many years of case law and are applied as the minimum qualitative level required for a reference to be effective. *In re Hoeksema*, 399 F.2d 269, 273, 158 USPQ 596, 600 (CCPA 1968); *In re LeGrive*, 301 F.2d 929, 936, 133 USPQ 365, 372 (CCPA 1962).

In an electrical or mechanical combination, such as a computer system, a method implemented on a computer, or a computer program product, where results achieved are relatively predictable, great care must be taken to avoid viewing disclosures in prior art references through hindsight. A particular claimed invention often appears to have been disclosed in a reference, although the reader actually is reading into it the teachings and insights learned from the inventor's application. Hindsight must play no part in the determination of what a particular reference teaches a person of ordinary skill in the art at a time immediately prior to the applicant's date of invention. This is particular true where the cited reference does not identically disclose the invention. In re Colins, 462 F.2d 538, 174 USPQ 333 (CCPA 1972).

As discussed in more detail below, Tamayo does not teach each and every element of claims 1-60, does not present an enabling disclosure of the elements of the claims, and cannot without hindsight be said to teach the elements of the claims. The rejections therefore should be withdrawn, and the claims should be allowed. For these reasons, applicants respectfully traverse each rejection and request reconsideration of claims 1-60.

Identifying a Business Problem to Be Solved

Claim 1 is rejected on grounds that Tamayo teaches "identifying a business problem to be solved" at page 5, [0059]. In claim 1, identifying a business problem to be solved is an enabled step of a data mining process that supports selection of a data mining algorithm in dependence upon the business problem, that is, "selecting a data mining algorithm appropriate for solving the business problem." Tamayo at [0059] sets forth a general

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description of the prior art of data mining in terms of generic 'paradigms' of data mining. Tamayo notes in passing that these "paradigms have been applied to numerous problems in corporate and database mining ..." The mere fact that Tamayo contains the word 'problems' is in no way an enabling description of "identifying a business problem to be solved" as claimed and enabled in the present application. Even hindsight cannot turn the mere mention of 'problems' into an enabling description of the subject claim element.

Selecting A Data Mining Algorithm
Appropriate For Solving The Business Problem

Claim 1 is rejected further on grounds that Tamayo teaches "selecting a data mining algorithm appropriate for solving the business problem" at page 5, [0059]. In claims 1, "selecting a data mining algorithm appropriate for solving *the* business problem" is a claim element carried out in dependence upon the identification of a particular business problem, 'the' business problem identified in the previous claim step: "identifying a business problem to be solved." Tamayo at [0059] sets forth a general description of the prior art of data mining in terms of broad 'paradigms,' with no particular reference to domain-specific or problem-specific algorithms.

Tamayo apparently discusses general characteristics of types or categories of algorithms, its so-called 'paradigms,' but Tamayo at [0059] makes no pretense whatsoever of disclosing or enabling selecting a particular data mining algorithm appropriate for solving a particular identified business problem. Tamayo states that the generic association analysis paradigm (or group or type of algorithms) is "applied to transaction or market basket data," thereby describing only data types and providing no enabling description of selecting a particular algorithm for a particular business problem. Tamayo at [0059] states that the generic clustering paradigm "is used for data-reduction and for class discovery," thereby describing common, prior-art internal steps of data mining having nothing to do with selecting a particular algorithm for a particular business problem. Not even hindsight can turn these words from Tamayo into an enabling description of "selecting a data mining algorithm appropriate for solving the business problem."

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Defining Data Schema For Use As Inputs And
Outputs To And From The Mining Algorithm

Claim 1 is rejected further on grounds that Tamayo teaches "defining data schema for use as inputs and outputs to and from the mining algorithm, the data schema including input data schema and output data schema" at page 5, [0059]. In this element of claim 1, the "mining algorithm" is a particular algorithm selected for a particular business problem, and the claim element is defining data schema, input schema and output schema, for use with the particular data mining algorithm. What Tamayo describes at [0059] are mere general, prior-art characteristics of input datasets as they are related to the generic paradigms of data mining described by Tamayo at [0059]. Tamayo states, for example, that "An input dataset then looks like a large, mostly-populated two-dimensional table where the columns correspond to attributes (independent variables)." Such a statement amounts to a mere declaration that data mining algorithms utilize input datasets. More particularly, this particular statement will be seen by anyone of skill in the art to characterize most of the datasets on most of the computers in the world. Tamayo at [0059] in fact presents no hint of an enabling disclosure of the subject claim element. Again applicants propose with respect that not even hindsight can turn Tamayo at [0059] into an enabling description of "defining data schema for use as inputs and outputs to and from the mining algorithm, the data schema including input data schema and output data schema."

Creation Of A Predefined Data Mining Model

Claim 1 is rejected further on grounds that Tamayo teaches "defining a data mining model dependent upon the data schema, defining a data mining model resulting in the creation of a predefined data mining model, whereby a domain-specific analytic application is developed, the analytic application having at least one predefined data mining model." at pages 7-8, [0094]. The actual claim element is: "defining a data mining model dependent upon the data schema, defining a data mining model resulting in

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the creation of a predefined data mining model;" which is separated by a semicolon from the final clause of claim 1: "whereby a domain-specific analytic application is developed, the analytic application having at least one predefined data mining model." That is, the whereby clause modifies the entire claim. That is, this claim element is the "creation of a predefined data mining model" in dependence upon "the data schema." The "data schema" is the input and output data schema defined for use as inputs and outputs to and from the particular data mining algorithm that has been selected as appropriate for solving a particular identified business problem.

Tamayo at [0094] is a description of a data flow diagram, Figure 10 of Tamayo, which also depicts an "enterprise web mining system 1000." Tamayo states that the enterprise web mining system 1000 includes untrained data mining models, trained data mining models, and deployed data mining models. That is, Tamayo at [0094], to the extent that it discusses data mining models, is once again a generic description of many data mining systems, most of which certainly include untrained data mining models, trained data mining models, and deployed data mining models. And again, none of this wording from Tamayo at [0094] presents any resemblance whatsoever of an enabling description of "defining a data mining model dependent upon the data schema, defining a data mining model resulting in the creation of a predefined data mining model" as claimed and taught in the present application.

Claims 2-20, 21-40, and 41-60

Claims 2 – 20 depend from claim 1. If claim 1 stands, then claims 2-20 stand also. As explained in detail above in this Response, claim 1 stands because Tamayo does not teach each and every element of claim 1, does not present an enabling disclosure of the elements of claim 1, and cannot without hindsight be said to teach the elements of claim 1. Because claim 1 stands, claims 2-20 stand also. The rejections of claims 2-20 therefore should be withdrawn, and the claims should be allowed. Applicants therefore request reconsideration of claims 1-20.

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As noted by the Examiner, claims 21-40 recite "a system" comprising means similar to the methods of claims 1-20. Claims 21-40 are rejected by the Examiner according to the same rationale as stated in the Office Action for the rejections of claims 1-20. Applicants have demonstrated above, however, that claims 1-20 should stand. Applicants respectfully propose, therefore, that the rejections of claims 21-40 should be withdrawn, and claims 21-40 should be allowed. Applicants request reconsideration of claims 21-40.

As noted by the Examiner, claims 41-60 recite "a computer program product" comprising means similar to the methods of claims 1-20. Claims 41-60 are rejected by the Examiner according to the same rationale as stated in the Office Action for the rejections of claims 1-20. Applicants have demonstrated above, however, that claims 1-20 should stand. Applicants respectfully propose, therefore, that the rejections of claims 41-60 should be withdrawn, and claims 41-60 should be allowed. Applicants request reconsideration of claims 41-60.

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Conclusion

Applicants acknowledge the cited art made of record and not relied upon in this case. Applicant believes that the case, as amended and in view of the reasoning provided in this Response, is in condition for allowance. An early Notice of Allowance is respectfully requested.

Should the Examiner have any need to contact applicants at any time, the Examiner is invited to phone the applicants' attorney, John Biggers, at 512-472-9881 at any time to discuss the claims and insure the case is in condition for allowance.
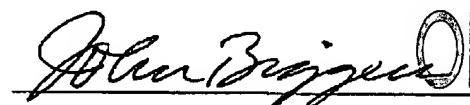
The Commissioner is hereby authorized to charge or credit Deposit Account No. 09-0447 for any fees required or overpaid.

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Respectfully submitted,   **SEP 1 6 2003**

Date: _9·16·03_   By: _[signature]_ OFFICIAL

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